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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/994,583

Applicant(s)

CLEARY ET AL.

Examiner

Michael Van Handel

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 23 October 2007.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-25,27 and 28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-25,27 and 28 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
- Certified copies of the priority documents have been received.
 - Certified copies of the priority documents have been received in Application No. _____.
 - Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- Notice of References Cited (PTO-892)
- Notice of Draftsperson's Patent Drawing Review (PTO-948)
- Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- Notice of Informal Patent Application
- Other: _____

DETAILED ACTION

Response to Amendment

1. This action is responsive to an Amendment filed 10/23/2007. Claims **1-25, 27, 28** are pending. Claims **1, 2, 12, 13, 28** are amended. Claim **26** is canceled. The examiner hereby withdraws the objections to claims **13** and **28** in light of the amendment.

Response to Arguments

1. Applicant's arguments regarding claims **1-12** and **28**, filed 10/23/2007, have been fully considered, but they are not persuasive.

Regarding the rejection of claims **1-11** under 35 USC 112, first paragraph, the applicant argues that the citations previously submitted in support of the limitation "via said desired transmission channel" were incorrect, and that the limitation is supported on page 17, lines 21-23 of Applicant's specification. The examiner respectfully disagrees. The passage in page 17, lines 21-23 of Applicant's specification recites "[t]hat is, the DIVA TV operating mode makes available the content provided during the previous "x" hours via that channel;" however, the cited passage does not state that the content recorded is provided to the user on the same transmission channel that it was recorded from. The passage of page 17, lines 21-23 is stating that the time-shifting system is recording "x" previous hours from a particular channel and then making those previous "x" hours that have been recorded from that particular channel available to the user, as indicated by page 17, line 20 (p. 17, lines 20-23). The passage does not suggest

how (which transmission channel) it makes the content available to the user; however, this can be found elsewhere throughout Applicant's specification.

Applicant's specification states that a Head End in the Sky (HITS) 105 provides a plurality of variable bit rate data streams comprising encoded or compressed audiovisual content. A decoder 106 operates to decode the plurality of baseband content streams, which are coupled to a multiple system operator (MSO), such as a cable television provider and to the Time Shift Introduction Process (TSIP) 170 (p. 11, lines 7-14). That is, the baseband content streams are separately routed to the user for normal television viewing and to the TSIP for time-shifting. Each set top terminal (STT) receives normal broadcast content (non-time-shifted content) via the normal MSO distribution channel (not shown) and time-shifted or on-demand content via the network equipment 160 (p. 11, lines 17-20). The various descriptions of the time-shifting processes throughout Applicant's specification indicate that, in initiating the time-shifting content, the STT is tuned to a different channel (p. 28, line 10; p. 29, line 7-8; p. 30, lines 21-22; & p. 31, lines 11-12). The time-shifting processes are ended by retuning the STT to the broadcast channel (p. 21, lines 13-15, 20-25 & p. 29, lines 14-18). As such, the examiner maintains that the broadcast content from the MSO and the time-shifted content from the TSIP are not distributed over the same transmission channel.

Regarding claims **1**, **2**, **12**, and **28**, the applicant argues that Ellis et al. fails to teach or suggest at least that the storing dynamically, in a mass storage device and for a predefined period of time, compressed audiovisual data received from said desired transmission channel according to a title plan generated by a time shift scheduler, wherein said title plan includes a plurality of content, wherein at least one of said plurality of content has a variable duration. The examiner

respectfully disagrees. The applicant specifically argues that Ellis et al. discloses a program guide that generates a record request and transmits the request to the media server, while Applicant's invention teaches that a time shift scheduler generates a title plan, which is then provided to the Interactive Programming Guide system. Ellis et al. discloses that record requests generated by program guides implemented on interactive program guide television equipment may be queued in request queue 110 for consolidation, and that consolidator 115 may be a process running on remote media server 24. Consolidator 115 consolidates multiple record requests for the same programs and places individual and group record jobs on job queue 120 (p. 6, paragraph 85). That is, even if the record requests come from user television equipment, the remote media server schedules the requests for recording. As such, the examiner interprets the remote media server to include a time shift scheduler that generates a title plan, as currently claimed.

In response to the applicant's argument that the applicant claims the embodiment where the title plan is generated by the time shift scheduler and not a user, it is noted that these features upon which applicant relies (i.e., title plan is generated by a time shift scheduler and not a user) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Further regarding claims 1, 2, 12, and 28, the applicant argues that Ellis et al. does not teach storing dynamically a plurality of content, wherein at least one of said plurality of content has a variable duration. The examiner respectfully disagrees. The examiner acknowledges Applicant's argument that the applicant's invention provides dynamic storage of content having

variable duration, because the allocation of memory may be continually updated; however, the examiner notes that “because the allocation of memory may be continually updated” is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant’s specification describes sporting events as content of variable duration (p. 10, lines 20-21). Ellis et al. discloses that a user may record sporting events at the remote media server (p. 3, paragraph 60; p. 10, paragraph 122; p. 13, paragraph 148; & Fig. 18a). As such, the examiner maintains that Ellis et al. meets the limitation that the “title plan includes a plurality of content, wherein at least one of the plurality of content has a variable duration,” as currently claimed. Ellis et al. further discloses that a user may be able to cache programs in real-time. A user may indicate a desire to record a program on remote media server 24 by pressing a “PAUSE” key on remote control 40. A record request is then issued to remote media server 24. Remote media server begins recording the program at that point and until the program is finished or until the user fast-forwards to the end of the cached copy (p. 15, paragraph 165 & p. 19, paragraph 200). The examiner notes that the duration of the content changes over time as more of the content is cached, and that the total recorded duration may depend on whether the user fast-forwards to the end or not. As such, the examiner maintains that Ellis et al. meets the limitation that the “title plan includes a plurality of content, wherein at least one of the plurality of content has a variable duration,” as currently claimed. The examiner acknowledges the applicant’s argument that it is possible that the invention of Ellis et al. only captures an amount equivalent to the reserved time block on the program guide, thereby not recording the entire

sports event if the sporting event continued beyond the reserved time block. The examiner notes; however, that the claims fail to recite language limiting the invention as such. Therefore, the examiner maintains that Ellis et al. meets the limitation of “at least one of said plurality of content has a variable duration,” as currently claimed.

Still further regarding claims 1 and 2, note the the rejection of claims 1 and 2 under 35 USC 112, first paragraph below. The applicant argues that Ellis et al. fails to teach providing to said user said compressed audiovisual data beginning with a portion of said compressed audiovisual data having associated with it a first temporal parameter via said desired transmission channel. The examiner respectfully disagrees. As noted in the Office Action mailed 8/03/2007, Ellis et al. discloses that the recorder 125 is a process running on processing circuitry 11 of remote media server 24 and may direct the processing circuitry’s one or more tuners to particular channels at particular times (p. 6, paragraph 88). The same channels are received at user television equipment 22 over communication link 20 (p. 4, paragraphs 64, 65 & Figs. 2a-2d). The processing circuitry 11 decodes program files stored on storage 15 and converts them to suitable video signals for distribution by distribution equipment 21 (p. 5, paragraphs 75, 77). Since distribution equipment distributes both the original broadcast program and the recorded program files over communication link 20, the examiner maintains that Ellis et al. meets the limitation that the particular transmission channel that programs are captured from is the same as the transmission channel that provides captured content, as claimed. The examiner acknowledges the applicant’s argument that a communication link is not equivalent to a transmission channel; however, the examiner notes that a “channel” is a transmission path and that the term can refer to the physical cabling that connects the nodes on a network (see the

definition of "channel" and corresponding definition of "transmission path" at <http://www.webopedia.com>).

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Referring to claims 1 and 2, the examiner fails to find support for the limitation "via said desired transmission channel" in Applicant's specification. The lines cited by the applicant state that "[t]hat is, the DIVA TV operating mode makes available the content provided during the previous "x" hours via that channel;" however, the cited passage does not state that the content recorded is provided to the user on the same transmission channel that it was recorded from. The passage of page 17, lines 21-23 is stating that the time-shifting system is recording "x" previous hours from a particular channel and then making those previous "x" hours that have been recorded from that particular channel available to the user, as indicated by page 17, line 20 (p. 17, lines 20-23). The passage does not suggest how (which transmission channel) it makes the

content available to the user; however, this can be found elsewhere throughout Applicant's specification (see corresponding section in Response To Arguments for further detail).

Claims **3-11** are rejected as being dependent on claim 2.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims **1-4, 7-16, 25, 27, 28** are rejected under 35 U.S.C. 102(e) as being anticipated by Ellis et al.

Referring to claim 1, see the rejection under 35 USC 112 above. Ellis et al. discloses a method, comprising:

- receiving audiovisual data from a desired transmission channel (the recorder 125 is a process running on processing circuitry 11 of remote media server 24 and may direct the processing circuitry's one or more tuners to particular channels at particular times. The channels are also received at user television equipment 22 over communication link 20. The processing circuitry 11 is suitable for decoding program files stored on storage 15 and converting them to suitable video signals for distribution by

- distribution equipment 21)(p. 4, paragraphs 64, 65; p. 5, paragraphs 75, 77; p. 6, paragraph 88; & Figs. 2a-2d);
- if said audiovisual data is not compressed according to a predetermined format, compressing said audiovisual data according to said predetermined format (p. 6, 7, paragraph 89);
 - storing dynamically, in a mass storage device and for a predefined period of time, compressed audiovisual data received from said desired transmission channel according to a title plan generated by a time shift scheduler, wherein said title plan includes a plurality of content, wherein at least one of said plurality of content has a variable duration (Ellis et al. discloses recording sporting events. Ellis et al. also discloses real-time caching a program in response to a "PAUSE" command until the user catches up with the live program. The examiner notes that the duration of this stored content varies until the program is over or the user fast-forwards to the end of the cached copy)(p. 3, paragraph 60; p. 6, paragraphs 83, 85-87; p. 10, paragraph 122; p. 11, paragraphs 125, 126, 133; p. 12, paragraphs 142, 143; p. 13, paragraphs 148, 149; p. 15, paragraph 165; p. 19, paragraph 200; & Figs. 18a, 25a); and
 - in response to a user request, providing to said user stored compressed audiovisual data beginning with a portion of said stored compressed audiovisual data having associated with it a first temporal parameter via said desired transmission channel (p. 15, paragraphs 163-166 & Fig. 22).

Referring to claim 2, see the rejection under 35 USC 112 above. Ellis et al. discloses a method in a system adapted to receive broadcast content on a desired transmission channel from

each of a plurality of content sources and forward said received broadcast content to a transport network for distribution to subscribers (the recorder 125 is a process running on processing circuitry 11 of remote media server 24 and may direct the processing circuitry's one or more tuners to particular channels at particular times. The channels are also received at user television equipment 22 over communication link 20. The processing circuitry 11 is suitable for decoding program files stored on storage 15 and converting them to suitable video signals for distribution by distribution equipment 21)(p. 4, paragraphs 64, 65; p. 5, paragraphs 75, 77; p. 6, paragraph 88; & Figs. 2a-2d), the method comprising:

- in response to a title plan generated by a time shift scheduler, wherein said title plan includes a plurality of content, wherein at least one of said plurality of content has a variable duration (Ellis et al. discloses recording sporting events. Ellis et al. also discloses real-time caching a program in response to a "PAUSE" command until the user catches up with the live program. The examiner notes that the duration of this stored content varies until the program is over or the user fast-forwards to the end of the cached copy)(p. 3, paragraph 60; p. 6, paragraphs 83, 85-87; p. 10, paragraph 122; p. 11, paragraphs 125, 126, 133; p. 12, paragraphs 142, 143; p. 13, paragraphs 148, 149; p. 15, paragraph 165; p. 19, paragraph 200; & Figs. 18a, 25a), storing dynamically said broadcast content in a server and associating with said broadcast content a temporal parameter (p. 7, paragraph 97);
- forwarding said broadcast content to said transport network for distribution in accordance with said temporal parameter to a requesting subscriber (the examiner

notes that the programs can be distributed according to a schedule in an NVOD approach)(p. 2, paragraph 13 & p. 7, paragraph 91); and

- in response to a subscriber request for temporally shifted content associated with said broadcast content, forwarding said stored broadcast content to said transport network for distribution to said requesting subscriber via said desired transmission channel (p. 15, paragraphs 163-166 & Fig. 22).

Referring to claim 3, Ellis et al. discloses the method of claim 2, further comprising forwarding to said transport network only the received broadcast content presently requested by any subscriber (p. 7, paragraph 91).

Referring to claim 4, Ellis et al. discloses the method of claim 2, further comprising storing, in said server, broadcast content presently requested by a threshold number of subscribers (p. 6, paragraphs 85, 86).

Referring to claim 7, Ellis et al. discloses the method of claim 2, wherein said storing of said desired broadcast content comprises storing a version of the desired broadcast content to generate a play track (p. 5, paragraph 74 & p. 7, paragraph 91).

Referring to claim 8, Ellis et al. discloses the method of claim 2, further comprising, storing selected broadcast content during a predetermined time interval of a broadcast schedule (p. 5, paragraph 76).

Referring to claim 9, Ellis et al. discloses the method of claim 2, wherein said subscriber request for temporally shifted content is initiated by receiving a subscriber title selection from a time shift interactive programming guide screen (p. 15, paragraphs 162, 163 & Fig. 22).

Referring to claim **10**, Ellis et al. discloses the method of claim 2, wherein said subscriber request for temporally shifted content is initiated by receiving a subscriber title selection from a time shift navigation screen (p. 15, paragraphs 162, 163 & Fig. 22).

Referring to claim **11**, Ellis et al. discloses the method of claim 2, wherein said subscriber request for temporally shifted content is initiated by receiving a pause or rewind subscriber selection while broadcasting of said desired content (p. 17, 18, paragraph 185).

Referring to claims **12** and **28**, Ellis et al. discloses a method/system for providing video information in an interactive information distribution system to a plurality of subscribers, comprising:

- receiving a plurality of scheduled broadcast programs on a desired transmission channel in real-time (the recorder 125 is a process running on processing circuitry 11 of remote media server 24 and may direct the processing circuitry's one or more tuners to particular channels at particular times. The channels are also received at user television equipment 22 over communication link 20. The processing circuitry 11 is suitable for decoding program files stored on storage 15 and converting them to suitable video signals for distribution by distribution equipment 21)(p. 4, paragraphs 64, 65; p. 5, paragraphs 75-77; p. 6, paragraph 88; & Figs. 2a-2d);
- selecting a portion of said broadcast programs according to a title plan generated by a time shift scheduler, wherein said title plan includes a plurality of content, wherein at least one of said plurality of content has a variable duration (Ellis et al. discloses recording sporting events. Ellis et al. also discloses real-time caching a program in response to a "PAUSE" command until the user catches up with the live program.

The examiner notes that the duration of this stored content varies until the program is over or the user fast-forwards to the end of the cached copy)(p. 3, paragraph 60; p. 6, paragraphs 83, 85-87; p. 10, paragraph 122; p. 11, paragraphs 125, 126, 133; p. 12, paragraphs 142, 143; p. 13, paragraphs 148, 149; p. 15, paragraph 165; p. 19, paragraph 200; & Figs. 18a, 25a);

- processing said selected broadcast programs into temporally adjusted content, such that the temporally adjusted content is associated with said selected broadcast programs (the examiner notes that by recording content, it can be viewed at a different time than when it was aired. The examiner interprets such content to be temporally adjusted (p. 15, paragraph 166);
- storing dynamically said temporally adjusted content (p. 12, 13, paragraph 143);
- broadcasting said plurality of scheduled broadcast programs to said plurality of subscribers via said desired transmission channel (p. 4, paragraph 64 & p. 6, paragraphs 85, 86); and
- in a first mode of operation, associating a temporal parameter to said temporally adjusted content and streaming, on-demand, said temporally adjusted content having said temporal parameter to those subscribers viewing said selected broadcast programs currently being broadcast, such that said subscribers may interactively activate such temporally adjusted content contemporaneously with said currently broadcast programs (p. 15, paragraphs 163-66).

Referring to claim 13, see the claim objection above. Ellis et al. discloses the method of claim 12, further comprising providing a navigator list (directory) to said subscribers having

screens presenting said selected broadcast programs having temporally adjusted content for viewing and selection, wherein in an alternate mode of operation, streaming, on-demand, said temporally adjusted content via said navigator list, such that said subscribers may interactively activate such temporally adjusted content during viewership of previously scheduled broadcast programs selected from said navigator list (p. 13, paragraph 145 & Fig. 18a).

Referring to claim 14, Ellis et al. discloses the method of claim 13, wherein said subscribers may interactively switch between said first mode and said alternate mode of operation (the examiner notes that the remote media server 24 can perform real-time caching of a program, allowing a user to continue watching later. The user can then catch up to the aired program by fast-forwarding. The user could also switch to a different stored program through the directory listing)(p. 13, paragraph 145; p. 15, paragraphs 165, 166; & Fig. 18a).

Referring to claim 15, Ellis et al. discloses the method of claim 12, wherein said selecting step comprises:

- monitoring subscriber viewership and selecting those broadcast programs having a viewership exceeding a predetermined metric (p. 6, paragraphs 85, 86 & p. 13, paragraph 148).

Referring to claim 16, Ellis et al. discloses the method of claim 12, wherein said selecting step further comprises:

- generating title plans for identifying said broadcast programs to be temporally adjusted (p. 15, paragraph 166); and

- defining a temporal availability window for each program (the examiner notes that the remote media server 24 records the program from the position at which the user began recording up to the position of the aired program (p. 15, paragraph 165, 166).

Referring to claim **25**, Ellis et al. discloses the method of claim 12, wherein said first mode of operation further comprises providing an interactive program guide (IPG) to said subscribers having screens presenting said broadcast programs having temporally adjusted content for viewing and selection (p. 13, paragraphs 145-148; & Fig. 18a-d).

Referring to claim **27**, Ellis et al. discloses the method of claim 12, wherein said first mode of operation comprises receiving a temporal control message from a subscriber selected from the group of temporal control messages consisting of pause, rewind, and fast-forward (p. 9, paragraph 111 & p. 15, paragraphs 163, 164).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims **5, 6, 17-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis et al. in view of Moeller et al.

Referring to claims **5** and **6**, Ellis et al. discloses the method of claim 2. Ellis et al. further discloses allowing a user to pause, stop, rewind, fast-forward, or play a program at a remote media server (p. 15, paragraph 162). Ellis et al. does not specifically disclose that the

step of storing comprises storing a temporally sub-sampled version of the desired broadcast content to generate a fast-forward track. Moeller et al. discloses a system that is capable of transferring or playing a normal play stream at any of various indicated positions or locations (col. 6, l. 45-49). The media server stores fast forward and fast reverse streams in association with normal play streams (col. 4, l. 61-65). The fast forward and fast reverse streams have different presentation rates than the normal play stream and are generated from the normal play stream (col. 6, l. 51-59). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the step of storing in Ellis et al. to include storing fast forward and fast reverse streams in association with a normal play stream, such as that taught by Moeller et al. in order to decrease latency time at a video server.

Referring to claim 17, Ellis et al. discloses the method of claim 16. Ellis et al. does not disclose that the processing step comprises generating real-time encoded play tracks, fast-forward tracks, rewind tracks, and entry point data (EPD) files associated with each track, said fast-forward and rewind tracks forming said temporally adjusted content. Moeller et al. discloses generating fast forward and fast reverse video streams from a normal play stream (col. 6, l. 55-59) and embedding indexing information within the streams to provide for indexing between the streams (col. 9, l. 10-14 & col. 11, l. 39-41). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the processing step of Ellis et al. to include generating fast forward and fast reverse video streams from a normal play stream and embedding indexing information within the streams to provide for indexing between the streams, such as that taught by Moeller et al. in order to efficiently index to different positions in a video stream in a video delivery system (col. 4, l. 20-23).

Referring to claim 18, the combination of Ellis et al. and Moeller et al. teaches the method of claim 17. Ellis et al. further discloses encoding the broadcast programs identified in the title plan (p. 6, 7, paragraph 89) and buffering said encoded broadcast programs (p. 6, 7, paragraph 89). Ellis et al. does not disclose that the processing step comprises encoding said broadcast programs to form said temporally adjusted programs. Moeller et al. discloses generating compressed fast forward and fast reverse video streams from a normal play stream (col. 6, l. 55-59). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the processing step of Ellis et al. to include generating compressed fast forward and fast reverse video streams from a normal play stream, such as that taught by Moeller et al. in order to decrease latency time at a video server.

Referring to claim 19, the combination of Ellis et al. and Moeller et al. teaches the method of claim 18. Ellis et al. does not disclose that the processing step further comprises:

- receiving packetized transport streams from at least one encoder; and
- inserting title identification codes (TICs) to each packet to enable said transport streams to be identified as said real-time encoded play tracks, fast-forward tracks, and rewind tracks.

Moeller et al. discloses generating compressed fast forward and fast reverse video streams from a normal play stream (col. 6, l. 56-59). Moeller et al. further discloses that the encoded stream includes sequence headers that include presentation timestamps and information describing the frame rate and picture size (col. 9, l. 57-62). Moeller et al. further discloses embedding indexing information within the normal play stream and associated trick play streams to provide for indexing between the streams (col. 9, l. 10-14). It would have been

obvious to one of ordinary skill in the art at the time that the invention was made to modify the processing step of Ellis et al. to include embedding timestamps, frame rate information, and indexing information within play streams and trick play streams, such as that taught by Moeller et al. in order to decrease latency time at a video server.

Referring to claims **20** and **21**, the combination of Ellis et al. and Moeller et al. teaches the method of claim 19. Ellis et al. does not disclose generating EPD files as fast-forward and rewind tracks are being created. Moeller et al. discloses generating and embedding index information within normal play streams and associated trick play streams to provide for indexing between the streams (col. 9, l. 10-14). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify Ellis et al. to include generating and embedding index information within normal play streams and associated trick play streams, such as that taught by Moeller et al. in order to decrease latency time at a video server.

5. Claims **22-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis et al. in view of Moeller et al. and further in view of Youden et al.

Referring to claim **22**, the combination of Ellis et al. and Moeller et al. teaches the method of claim 19, wherein the storing step includes receiving the buffered encoded broadcast programs (p. 6, 7, paragraphs 89, 90) and storing the real-time play tracks in a plurality of extents (p. 6, paragraphs 82, 83). Neither Ellis et al. nor Moeller et al. disclose that the storing step comprises storing said fast-forward tracks in extents in front to back order and

storing said rewind tracks in extents in back to front order. Youden et al. discloses storing selected video data for a FF version in the same order as the original video data is stored and storing the selected video data for the FR version in reverse order to the original version of the video data (col. 4, l. 3-7). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the storing step in the combination of Ellis et al. and Moeller et al. to include storing video data for a FF version in the same order as the original video data is stored and storing the selected video data for the FR version in reverse order to the original version of the video data, such as that taught by Youden et al. in order to decrease latency time at a video server.

Referring to claim **23**, the combination of Ellis et al., Moeller et al., and Youden et al. teaches the method of claim 22, where said storing step further comprises storing selected broadcast programs from a particular channel for a fixed window of time (Ellis et al. p. 6, paragraph 87).

Referring to claim **24**, the combination of Ellis et al., Moeller et al., and Youden et al. teaches the method of claim 22, where said storing step further comprises storing selected broadcast programs from a plurality of channels (Ellis et al. p. 6, paragraph 88).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Labeeb et al. discloses an overtime recording feature to cover situations in which a program extends beyond the intended duration, such as for sports and political events.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Van Handel whose telephone number is 571-272-5968. The examiner can normally be reached on 8:00am-5:30pm Mon.-Fri..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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